

CLAIMS

What is claimed:

1. A computer system comprising:

a frame;

a plurality of chassis inserted into the frame;

a plurality of electronic components, each on a respective chassis;

a plurality of thermal components, each thermally coupled to a respective electronic component; and

a fluid-channeling structure on the frame, the fluid-channeling structure having a fluid inlet and a fluid outlet, heat transferring from each of the thermal components to a fluid after the fluid enters through the fluid inlet and before the fluid exits out of the fluid outlet.

2. The computer system of claim 1 wherein each thermal component includes a main structure and a plurality of fins extending from the main structure, over which the fluid flows.

3. The computer system of claim 2 wherein the fluid-channeling structure is an air duct.

4. The computer system of claim 2 wherein the fluid flows sequentially over

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successive ones of the thermal components.

5. The computer system of claim 4 wherein the fins of each respective thermal component are aligned with a direction of flow of the fluid over the respective thermal component.

6. The computer system of claim 1 wherein each thermal component has a thermal component internal volume, the fluid flowing through the thermal component internal volumes.

7. The computer system of claim 6 wherein the fluid flows in parallel through the thermal component internal volumes.

8. The computer system of claim 1 wherein the frame is a support rack frame and the chassis are located above one another in the support rack frame.

9. The computer system of claim 1, further comprising:

a plurality of heat-absorbing components, each located against a respective electronic component and having a component internal volume where a thermal fluid is heated; and

a conduit through which the thermal fluid flows, whereafter heat transfers from the thermal fluid to a respective thermal component.

10. The computer system of claim 9 wherein the thermal components are frame components on the frame, further comprising:

a plurality of chassis components, each chassis component being on a respective chassis, being thermally coupled to both a respective electronic component and a respective frame component, the respective chassis being at least partially removable out of the frame, whereafter the respective chassis component is thermally disengaged from the respective frame component.

11. The computer system of claim 10 wherein the respective chassis component is thermally coupled to the respective electronic component when the respective chassis component is thermally disengaged from the respective frame component.

12. The computer system of claim 1 wherein the electronic components are processors.

13. A computer system comprising:

a frame;
a plurality of chassis inserted into the frame;
a plurality of electronic components, each electronic component on a respective chassis;
a plurality of thermal components, each thermal component being thermally

coupled to a respective electronic component; and

an air duct on the frame, the air duct having an air inlet and an air outlet, heat transferring from each of the thermal components to air after the air enters through the air inlet and before the air exits out of the air outlet.

14. The computer system of claim 13 wherein each thermal component includes a main structure and a plurality of fins extending from the main structure, over which the air flows.

15. The computer system of claim 14 wherein the air flows sequentially over the fins of subsequent ones of the thermal components.

16. A computer system comprising:

a frame;

a plurality of chassis inserted into the frame;

a plurality of electronic components, each electronic component on a respective chassis;

a liquid inlet;

a plurality of thermal components, each thermal component being thermally coupled to a respective electronic component, each thermal component having a thermal component internal volume; and

a liquid outlet, a liquid flowing through the thermal component internal

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volumes after the liquid flows through the liquid inlet but before the liquid flows through the liquid outlet.

17. The computer system of claim 16 wherein the liquid flows in parallel through the thermal component internal volumes.

18. The computer system of claim 16 wherein the liquid flows through two chambers in each thermal component.

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